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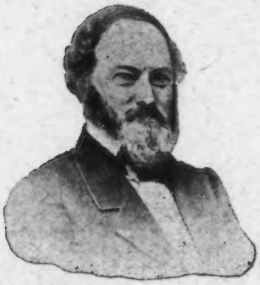

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1807–1865

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WILLIAM HAMPTON PATTON.

ENTOMOLOGICAL NEWS

AND

PROCEEDINGS OF THE ENTOMOLOGICAL SECTION

THE ACADEMY OF NATURAL SCIENCES, PHILADELPHIA

VOL. XXXII FEBRUARY, 1921 No. 2

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William Hampton Patton.

By W. E. BRITTON and L. O. HOWARD.

(Portrait, Plate I)

William Hampton Patton was born in Waterbury, Connecticut, March 10, 1853, and died in Hartford, Connecticut, December 26, 1918. He was the son of William Patton, and he prepared for college at Williston Seminary, Easthampton, Massachusetts. He entered the academic department of Yale University in 1872 and, receiving a colloquy appointment in his senior year, graduated in the class of 1876 with the degree of B. A. Even before graduating, Mr. Patton was interested in the natural sciences, especially zoology and botany. After graduating he took two years of work in zoology at Yale, and during a part of this time served as assistant to Professor A. E. Verrill. This was followed by two years of independent study at his home in Waterbury.

During the summer of 1879, and from June 1880 to April 1881, he was a special agent of the United States Entomological Commission, at Washington, D. C., of which Dr. C. V. Riley was chairman. Dr. Riley was Government Entomologist from June 1878 until March 1879, when he resigned, and

Professor J. H. Comstock was appointed to the position and held office until March 1881. Riley returned soon afterward. During the time of Comstock's incumbency, Riley conducted the office of the U. S. Entomological Commission in his own house in Washington, and had for his assistants Messrs. E. A. Schwarz, W. H. Patton, H. G. Hubbard and W. S. Barnard. Mr. Schwarz states that all of these men were together at Selma, Alabama, in 1881. It is said that Dr. Riley met Patton at a meeting of the American Association for the Advancement of Science and had been attracted to his published papers in the *Canadian Entomologist*. Patton specialized in the Hymenoptera and was more or less interested in the Proctotrypidae at the time when Dr. Howard began his work on the Chalcididae, and they had occasional conferences over parasitic Hymenoptera. Patton was a scholarly man, well educated and with an excellent knowledge of the literature; his work was careful and sound and is so regarded by Hymenopterists to this day. He had an excellent personal appearance, but was rather shy and retiring, somewhat typical of the young professor in a large university. Few became intimate with him, but all recognized his broad general knowledge, his keenness, and especially his extensive acquaintance with the literature of all groups of insects. He took nothing for granted and was loath to believe personal and even recorded statements until he had investigated them for himself.

While Patton was in Washington his father became very ill, and he left Washington and nursed him through his final illness. He was indefatigable in his care of the patient and, losing sleep and rest, had a nervous breakdown after his father's death. From that time on he acted strangely and was finally placed in a private asylum in New Haven. He escaped from the asylum and reappeared in Washington in 1882, in worn clothes and in poor physical condition, and Dr. Riley promptly gave him a job in the U. S. Department of Agriculture. He worked only a few days, when news came to the office from his boarding house keeper that he was acting strangely, and Dr. Riley and Dr. Howard at once visited him and finding him absolutely insane, arranged with the police authorities to take him back to the asylum in New Haven.

Patton was not continuously insane, but had long lucid periods extending over many months, during which he accomplished considerable entomological work, and some of his manuscripts were sent to the Bureau of Entomology to be placed for publication.

From 1882 to 1885 Patton resided in New York City, Utica and Rochester, New York, and West Randolph, Vermont, but returned to Connecticut suffering from ill health due to too close application to work. At first he was in a retreat in New Haven, and Dr. Howard called upon him in 1894, and found him perfectly lucid, and had an interesting talk about entomological matters. For a number of years before his death he was an inmate of the Hartford Retreat for the Insane at 400 Washington Street, Hartford.

Soon after the office of State Entomologist was established in Connecticut, in 1901, Patton wrote a few letters to the office, calling attention to certain entomological points that needed investigating. His letters were perfectly lucid. He once asked to be appointed as inspector, and again asked for the loan of fifty dollars to enable him to bring certain essential entomological discoveries before the public. Not knowing that he was insane and confined in a retreat, the State Entomologist promised to be in Hartford on an early named date and asked Patton to meet him at a certain hour and place and talk about it. Of course Patton was not there, and not long afterward Professor Verrill gave the information regarding Patton's insanity. He was unmarried, and apparently his insanity was inherited. His sister became insane and drowned herself in 1897 or 1898. Patton's death resulted from valvular disease of the heart and arteriosclerosis.

Patton was a member of both the American and British Associations for the Advancement of Science, a Fellow of the Entomological Society of London, a charter member of the Biological Society of Washington, D. C., a member of the Entomological Society of Ontario, and of the Connecticut Academy of Science.

It is interesting to note that Patton was once a pupil of H. F. Bassett, also a Hymenopterist, of Waterbury, Connecti-

cut. In a letter in 1895 Bassett wrote: "Will was a pupil in my private school when only seven or eight years old. I cannot forget him nor the bright promise of his early life."

Entomologists will be interested to learn what became of Patton's collections and particularly the types of the species described by him. Through the kindness of Miss Helen M. Bassett, it has been possible to examine some letters on this subject between her father, Mr. H. F. Bassett of Waterbury, and Mr. Ezra T. Cresson of Philadelphia, written in 1885 and also in 1898. We learn that Patton borrowed some 3000 specimens of Andrenidae from the American Entomological Society, intending to study this group, but on account of his condition never progressed very far. These specimens, together with his own collection, were placed in the vaults of a Safe Deposit Company in New York. Though this vault may have been burglar proof, it was not *Anthrenus* proof, and Mr. Cresson wrote Dr. Bassett under date of March 10, 1898, as follows: "Poor Patton's collections, together with a valuable one of bees loaned him by the Society to study, was almost entirely destroyed while locked up in some Safe Deposit Company in New York. As you may remember, these were sent to the Society to care for such specimens as were worth saving, and to hold them subject to Mr. Patton's orders. We found more than three-fourths of the once fine collection completely destroyed, nothing but fragments and pins left, and nearly all his types disappeared in this way. We spent much time and labor in transferring those worth saving to new boxes and after disinfecting his boxes thoroughly we coned them and retransferred the specimens to them and kept them awaiting orders to return. After a while the orders came and we sent them back to him."

Since learning of Patton's death, inquiries regarding the collection were made of his conservator and administrator of his estate, who replied that though the collection was stored at the Retreat, Patton was unable to give it much attention for a good many years, also stating that "as a result it had become of practically no value, and on advice of those more familiar with such matters than myself, I caused it to be destroyed."

On account of Patton's condition and confinement, it has been difficult for entomologists to learn much about him and his work. For this reason we have endeavored to bring together within this article all available information for the convenience of working entomologists. Considerable data were procured from the Registrar's Office of Yale University. The following list of titles of Patton's published papers has been prepared by Miss Mabel Colcord, Librarian of the Bureau of Entomology:

LIST OF PAPERS PUBLISHED BY WILLIAM HAMPTON PATTON.

1876 A new locality for the yellow rattle. Botan. Gaz. v. 1, no. 4, p. 14, Feb. 1876.

1879 A gall-inhabiting ant. Amer. Nat. v. 13, no. 2, p. 126, Feb. 1879.

Observations on the genus *Macropis*. Amer. Jour. Science v. 18, p. 211-214, 1879.

Observations on the genus *Macropis*. Annals & Mag. Nat. Hist. v. 4, p. 286-290, 1879.

On certain Hymenoptera. Canad. Ent. v. 11, p. 12-15, Jan. 1879.

Notes on three species of *Xylocopa*. Canad. Ent. v. 11, p. 60, 1879.

Descriptions of several new Proctotrupidae and Chrysididae. Canad. Ent. v. 11, p. 64-68, Mar. 1879.

Descriptions of [*Chlorion aerarium*] a new fossorial wasp. Canad. Ent. v. 11, p. 133-134, 1879.

Descriptions of several Crabronidae. Canad. Ent. v. 11, p. 210-215, Nov. 1879.

Is this *Euchaetes collaris* Fitch? Psyche, v. 2, p. 252-253, July 1879.

The ovipositor of *Amblychila*. Psyche, v. 2, p. 260-261, 1879.

On the spiracles of Coleoptera and on the sound produced by *Polyphylla*. Psyche, v. 2, p. 278-279, 1879. Sept.-Dec.

American Bembecidae: tribe Stizini. U. S. Geol. & Geog. Survey of the Territories Bulletin, v. 5, no. 3, p. 341-347, 1879.

List of a collection of aculeate Hymenoptera made by Mr. S. W. Williston in Northwestern Kansas. U. S. Geol. & Geog. Survey of the Territories Bulletin, v. 5, no. 3, p. 349-370, 1879.

Generic arrangement of the bees allied to *Melissodes* and *Anthophora*. U. S. Geol. & Geog. Survey of the Territories Bulletin, v. 5, no. 3, p. 471-479, 1879.

1880 Description of the species of *Macropis*. Entomologist's Monthly Magazine, v. 17, p. 31-35, June, 1880.

Two new bees of the genus *Sphecodes* [*S. arvensis* and *S. falcifer*]. Ent. Amer. v. 3, p. 230, Sept., 1880.

1881 Synopsis of the New England species of *Colletes*. Boston Society

of Natural History. Proc. v. 20, p. 142-144 [1879]. (Published 1881.)

Some characters useful in the study of the Sphecidae. Boston Society of Natural History. Proc., v. 20, p. 378-385 [1880]. (Published 1881.)

1881 List of North American Larridae. Boston Society of Natural History. Proc., v. 20, p. 385-397 [1880]. (Published 1881.)

Note on the Philanthinae. Boston Society of Natural History. Proc., v. 20, p. 397-405 [1880]. (Published 1881.)

1884 Some notes on the classification and synonymy of fig-insects. Entomological Society of London. Proceedings 1884, p. xiv-xvii.

Sound producing organs in *Anomala, Anthonomus* and other Coleoptera. Psyche, v. 4, p. 146, March, 1884.

1890 Notes upon *Ephestia interpunctella* (Hübn) Zeller. U. S. Dept. Agr. Div. Ent. Insect Life, v. 3, no. 4, p. 158-159, Nov., 1890.

1891 Scent glands in the larva of *Limacodes*. Canad. Ent. v. 23, p. 42-43, Feb., 1891.

Aphidivorous habits of *Feniseca tarquinius* (Fabr.) Grote. Canad. Ent., v. 23, p. 66-67, March, 1891.

Homohadena infixa. Entom. News, v. 2, p. 206, Dec., 1891.

1892 Habits of *Prenolepis imparis* (Say) the winter ant. American Naturalist, v. 26, p. 871-872, Oct., 1892.

Description of the female of *Aphenogaster fulva*. American Naturalist, v. 26, p. 872, Oct., 1892.

Hexaplasta zigzag (Riley). Entom. News, v. 3, p. 61, March, 1892.

Anthophora walshii. Entom. News, v. 3, p. 61, March, 1892.

Notes upon Larridae. Entom. News, v. 3, p. 89-90, April, 1892.

Prevention of the peach yellows and rosette as caused by the yellows mite. Entom. News, v. 3, no. 4, p. 97, April, 1892. [*Bryobia pratensis.*]

Cynips Q-globulus Fitch. Entom. News, v. 3, p. 104, April, 1892.

Bombus fervidus Fabr. Entom. News, v. 3, p. 181, Sept., 1892.

Synonymy of butterfly parasites. Psyche, v. 6, p. 261, April, 1892.

1893 A new arrangement of the Coleoptera. Canad. Ent., v. 25, p. 9-10, Jan., 1893.

The preservation of the larval food by digger wasps. Entom. News, v. 4, p. 202-203, June, 1893.

Eastward range of Pacific Coast species. Entom. News, v. 4, p. 302, Nov., 1893.

1894 Habits of the leaping ant of Southern Georgia. American Naturalist, v. 28, p. 618-619, July, 1894.

Notes on the winter ant. American Naturalist, v. 28, p. 619, July, 1894.

1894 Description of a new *Pelecinus* from Tennessee. American Naturalist, v. 28, p. 895-896, Oct., 1894.

Zethus aztecus in Florida. Canad. Ent., v. 26, p. 140, May, 1894.

Folded wings in *Foenus*. Canad. Ent., v. 26, p. 146, May, 1894.

Identity of *Pezomachus* and *Hemiteles*. Entom. News, v. 5, p. 118-119, April, 1894.

Northward range of southern species. Entom. News, v. 5, p. 224, Sept., 1894.

Notes upon *Toxoneuron*. Psyche, v. 7, p. 178-179, Dec., 1894.

Notes upon wasps I. Entomological Society of Washington. Proc., v. 3, p. 45-47, March 8, 1894.

1895 Relationship of the fauna of Puget Sound to that of Mexico and Canada. Canad. Ent., v. 27, p. 280, Oct., 1895.

Systematic value of the larva of *Spermophagus*. Canad. Ent., v. 27, p. 290, Oct., 1895.

1896 Rank in the Heteroptera. Entom. News, v. 7, p. 202, Sept., 1896.

Parapompilus. Entom. News, v. 7, p. 248, Oct., 1896.

1897 *Monodontomerus* in Appalachia. Canad. Ent., v. 29, p. 59. March, 1897.

A principle to observe in naming galls: two new gall-making Diptera. Canad. Ent., v. 29, p. 247-248, Oct., 1897.

Thyreopus advenus (Sm.) Pack. Canad. Ent., v. 29, p. 248, Oct., 1897.

Clypeadon. Entom. News, v. 7, p. 13, Jan., 1897.

Acorn insects. Entom. News, v. 7, p. 76-77, pl. 5, April, 1897.

The number of prolegs in insect larvae. Entom. News, v. 7, p. 122-123, June, 1897.

1909 A synonymical definition of *Nysson* and *N. aurinotus*. Ohio Naturalist, v. 9, p. 442-445, 1909.

APPENDIX.

In response to our request, Mr. S. A. Rohwer, of the Bureau of Entomology and the National Museum, has sent us the following statement concerning Patton's taxonomic work:

So far as I have been able to ascertain from an examination of Patton's papers (and I have seen all but two), he described forty species of Hymenoptera. They may be arranged in super-families as follows:

Sphecoidea	16 spp.
Formicoidea	2 spp.
Chrysididae	4 spp.
Cerphoidea	2 spp.
Mutilloidea	6 spp.
Apoidea	10 spp.
Total	**40 spp.**

Practically all of these species are now recognized by students of Hymenoptera and while most of them are represented in the National Collection, yet so far as I have been able to determine there are no specimens which can be considered as type material. Patton's descriptions, on the whole, are very satisfactory and we have less trouble understanding his species than we do those of some of the other students who worked at about the same time. In his revisionary work Patton described thirteen genera; eight of these belong to the superfamily Sphecoidea and five to the superfamily Apoidea. Among the bee genera are such common and well recognized ones as *Bombomelecta, Diadasia, Emphor* and *Entechnia*. Among the wasp genera the ones which are recognized all over the world are *Isodontia, Aphilanthops, Larropsis* and *Microbembex*. The other four wasp genera have been recognized by some students, while certain other students consider that they are founded upon too trivial characters to be treated as genera.

In looking over Patton's papers I have been struck with the fact that while practically all of his systematic work was done on Hymenoptera, most of his biological observations were made on lepidopterous insects.

Notes on Some of van der Wulp's Species of North American Anthomyiidae (Diptera).

By J. R. Malloch, Urbana, Illinois.

In working up the Anthomyiidae of North America I have found some difficulty in placing most of the described forms in their proper genera and this has been especially true of the species described by van der Wulp. At my request Mr. F. W. Edwards obtained for me specimens of twenty-four of the species from the original series in the British Museum as an exchange. These specimens have been used as a basis for the following notes and have been incorporated in the collection of the Illinois State Natural History Survey. They are undoubtedly paratypes of the species listed.

Clinopera hieroglyphica.

This species is the genotype of *Clinopera*. The male I have before me has characters that appear to justify the separation of *Clinopera* from *Cyrtoneurina*, the genotype of which is *uber* G.-T. The distinguishing characters may be summarized as follows:

Clinopera	*Cyrtoneurina*
First wing-vein setulose only basad of humeral vein; third setulose at base.	First wing-vein setulose only distad of humeral vein; third setulose to or almost to inner cross-vein.

Muscina tripunctata.

This species is the same as *Neomuscina cavicola* Townsend. I have a male and female from Townsend's material sent me by Dr. Aldrich; the male agrees in all particulars with a male from van der Wulp's series from northern Yucatan.

The genus is valid and the species must therefore appear in our list as *Neomuscina tripunctata* (v. d. Wulp).

Charadrella macrosoma.

A male and female from northern Yucatan. The only species of the genus.

Spilogaster rubripalpis.

A female of this species from Cuernavaca proves that *Ariciella flavicornis* Malloch is a synonym. The species will stand in our list as *Aricella rubripalpis* (v. d. Wulp) Malloch.

Mydaea obscura.

A male of this species from northern Yucatan has the pteropleura and the declivitous portion of lateral margin of thorax in front of scutellum with hairs in center, prosternum bare, lower margin of metathoracic spiracle with some black hairs, third wing-vein bare at base, hind tibial calcar absent, third vein slightly flexed forward at apex, scutellum with some hairs low down on sides at base, anterior intra-alar bristle absent.

I erect for the reception of this species the new genus NEOMUSCA, with the combination of characters above mentioned.

I have in my possession a male from Esperanza Ranch, Brownsville, Tex., July 25.

Phorbia fuscisquama.

A male from Omilteme, Guerrero, is an aberrant species referable to *Phaonia* as at present limited.

Mydaea concinna.

A female from Xucumanatlan, Guerrero. This species has a pair of strong cruciate interfrontal bristles, the lower supraorbital directed forward, prealar long, anterior intra-alar present, prosternum and pteropleura hairy, metathoracic spiracle with some black hairs along posterior margin, hypopleura bare, basal abdominal sternite hairy, first and third wing-veins with setulae on greater part of their lengths above, first bare below, third setulose at base below, hind tibial calcar present, third vein not curved forward at apex.

This species differs from *Ariciella* Malloch in the setulose wing-veins, bare lateral area proximad of base of scutellum, presence of hind tibial calcar and prealar, as well as in several other characters.

I propose for the reception of the species the new genus SMITHOMYIA, with the combination of characters above mentioned.

Mydaea pansa G. T.

A female specimen identified by van der Wulp as *pansa* is a true *Mydaea*, separable from any known to me by its testaceous yellow color.

Pogonomyia aterrima.

A true *Pogonomyia* closely allied to *minor* Malloch. I have one female before me from Ciudad, Mexico. This specimen is slightly larger than paratypes of *minor*, has the fore tibia with one strong and one very weak posteroventral bristle, the fore tarsi more slender, the hind tibia with three anterodorsal and posterodorsal bristles and the wings darker than in *minor*.

Limnophora socia.

One female from Omilteme, Guerrero. This species closely resembles *Helina obscurinervis* (Stein) and *H. poeciloptera* Malloch, having the same thoracic and hind tibial bristling, but the palpi, second antennal segment and base of third are yellow, and the apex of first vein and base of third are darkened. The arista is pubescent.

Belongs to *Helina* R.-D.

Spilogaster signatipennis.

A male from Guerrero. Belongs to the same group as the preceding species, but the hind femur has long fine bristles on the entire length of the anteroventral surface and shorter

hairlike bristles on posteroventral. Prealar minute. Arista short-haired.

A female from Omilteme has the hind femur with two or three bristles near base and four or five on apical third on anteroventral surface and the posteroventral surface bare.

Both sexes have the palpi black and the antennae almost so.

Spilogaster parvula.

A female from Tepetlapa, Guerrero. This species has the cross-veins less distinctly infuscated than in the other species of the *obscurinervis* group and the hind tibia with three anterodorsal and one posterodorsal bristle. The palpi at apices and all of third antennal segment are infuscated and the arista long haired. Thoracic bristles as in the preceding species.

Belongs to *Helina* R.-D.

Spilogaster copiosa.

A male and female from Omilteme, Guerrero. Postsutural dorsocentrals three, prealar minute or absent, arista short haired. Fore tibia with one to three posteroventral bristles, hind tibia with three anterodorsal bristles and one to three posterodorsal setulae, cross-veins not infuscated.

Belongs to *Helina* R.-D.

Leucomelina corvina.

A male in poor condition, Orizaba. This is a *Limnophora*. The thoracic dorsum in front of suture has three contiguous black marks, and behind the suture three contiguous black vittae, the one on each side not extending to scutellum. The second and third abdominal tergites each have a pair of large triangular black spots and the fourth has a smaller central spot. Mid tibia with one posterior bristle.

Leucomelina deleta.

One male, Omilteme, Guerrero. A *Limnophora*.

Differs from *corvina* in having a pubescent arista, eyes much closer together, thorax with three pairs of dorsocentral bristles, mid-tibia with two posterior bristles, and the abdomen with the paired dorsal spots extending from base to apex on each tergite, their inner margins straight, the outer concave in center.

Leucomelina minuscula.

One female, Atoyac, Vera Cruz. Very closely resembles *deleta*. The midtibia has one posterior bristle and the spots

on the abdomen are dilated at their posterior extremities. Both species lack the anterior intra-alar.

Leucomelina garrula.

One female, Guerrero. Very closely resembles *minuscula* but larger (7.25: 4.5 mm.), and with two posterior bristles on mid tibia.

Coenosia femoralis.

One female from Orizaba. This is *Bithoracochaeta leucoprocta* (Wied.). This species has the following synonyms: *antica* Walker, *calopus* Bigot, *despecta* Walker, *insignis* Stein, *pipunculina* Thomson, and *rufipes* Bigot, in addition to *femoralis*.

Coenosia macrocera.

A female, Guerrero. This species is an aberrant form with a median anterodorsal and no anteroventral bristle on hind tibia. The ocellar and postvertical bristles are long.

Coenosia punctulata.

A female, Omilteme, Guerrero. Similar in bristling of hind tibia to *macrocera*, but the antennae are shorter and stouter and the abdomen is nowhere yellow.

Hydrophoria flavipalpis.

One male from Sierra de las Aguas Escondidas, Guerrero. This species belongs to *Emmesomyia* Malloch and differs from those previously placed in the genus in having a black mark across middle of thorax, palpi pale, and tips of mid and hind femora black. The fifth abdominal sternite is different from that of any of the other species known to me.

Anthomyia dorsimaculata.

A male of this species from Omilteme, Guerrero. Belongs to the genus *Pegomyia* and closely allied to *vanduzeei* Malloch.

Hydrophoria transversalis.

A male and female from Guerrero. Stein has sunk this species as a synonym of *pictipes* Bigot and placed it in his genus *Taeniomyia*. I can not satisfactorily separate the genus from *Pegomyia*, the black transverse band on thorax used by Stein for that purpose being in my opinion too trivial for a generic character.

Hydrophoria collaris.

A female from Guerrero. Differs from the female of the preceding species in having no cruciate interfrontal bristles and the arista much shorter haired. Belongs also, to *Pegomyia*.

Phorbia prisca.

A female, Ciudad, Mexico. A *Hylemyia* very close to *ciliicrura* Zetterstedt. Impossible to say just what the species is.

A Bibliography on Fungous Insects and their Hosts.

By HARRY B. WEISS, New Brunswick, New Jersey.

While many papers have appeared on various insects which inhabit fungi, only a few of them mention the specific or generic name of the fungus and it is such papers which have been listed below. The list is as complete as it has been possible to make it and includes only references to American literature. A few of the references relate to insects indirectly associated with certain fungi and not usually considered as funguous insects. The writer will be pleased to know of any omissions.

COLEOPTERA.

Liodes basalis Lec. Smith, J. B. Insects of New Jersey, p. 230. (N. J. St. Mus. Rept. 1909).

Baeocera punctipennis Blatch. Blatchley, W. S. Col. Ind. p. 494, 1910.

Lycoperdina ferruginea. Lec. Blatchley, W. S. Col. Ind. p. 538, 1910.

Megalodacne ulkei Crotch. Dury, C. Canad. Ent. X, 210. Blatchley, W. S. Col. Ind. p. 545, 1910.

Ischyrus quadripunctatus Oliv. Weiss, H. B. Canad. Ent. LII, p. 14, 1920.

Mycotretus pulchra Say. Weiss, H. B. Canad. Ent. LII, p. 18, 1920.

Cucujus clavipes var. **puniceus** Mann. Hubbard, H. G. Canad. Ent. XXIV, p. 250-6, 1892.

Epuraea monogama Cr. Hubbard, H. G. Canad. Ent. XXIV, p. 250-6, 1892.

Peltis pippingskoeldi Mann. Hubbard, H. G. Canad. Ent. XXIV, p. 250-6, 1892.

Peltis ferruginea Linn. Hubbard, H. G. Canad. Ent. XXIV, p. 250-6, 1892.

Calitys scabra Thunb. Hubbard, H. G. Canad. Ent. XXIV, p. 250-6, 1892.

Thymalus fulgidus Erich. Dimmock, G. Direct. Collect. Coleop. p. 19, 1872. Beutenmuller, W. Ent. Amer. VI, p. 57, 1890. Breed, R. S. Bull. Mus. Comp. Zool. Harv. Coll. vol. XL, No. 7, p. 319, 1903. Packard, A. S. 5th Rept. U. S. Ent. Comm. p. 510, 1890. Smith, J. B. Insects of N. J., p. 276, 1909. Weiss, H. B. Ent. News XXXI, p. 1-3, 1920.

Agrilus bilineatus Web. Ruggles, A. G. 15th Rept. St. Ent. Minn. p. 54, 1914. Chapman, R. N. Jour. Agric. Res. Vol. III, No. 4, 1915.

Catorama nigritulum Lec. Weiss, H. B. Canad. Ent. LI. p. 255, 1919.

Dorcatoma dresdensis Hbst. Barber, H. S. Proc. Ent. Soc. Wash. X, p. 61, 1908.

Cis wenzeli Dury. Dury, C. Jour. Cin. Soc. Nat. His. XXII, p. 7, 1917.

Cis fuscipes Mell. Dury, C. Jour. Cin. Soc. Nat. His. XXII, p. 11, 1917.

Xestocis moznettei Dury. Dury, C. Jour. Cin. Soc. Nat. His. XXII, p. 15, 1917.

Sulcacis lengi Dury. Weiss, H. B. Canad. Ent. LI, p. 203, 1919.

Brachycis brevicollis Csy. Weiss, H. B. Bull. Brook. Ent. Soc. XIV, p. 145, 1919.

Ennearthron compacta Dury. Dury, C. Jour. Cin. Soc. Nat. His. XXII, p. 22, 1917.

Ceracis sallei Mell. Weiss, H. B. Bull. Brook. Ent. Soc. XIV, p. 144, 1919.

Octotemnus denudatus Csy. Dury, C. Jour. Cin. Soc. Nat. His. XXII, p. 27, 1917.

Cyllene robiniae Forst. Schrenk, H. von. Mo. Bot. Garden Rept. 12; 21-31, 1901. Schrenk, H. von & Spaulding, P. Bull. 149, U. S. Bur. Pl. Indus., p. 45, 1909.

Phellopsis obcordata Kirby. Packard, A. S. 5th Rept. U. S. Ent. Comm., p. 510, 1890. Dimmock, A. K. Psyche, IV, p. 284, 1885.

Phellopsus obcordata var. **porcata** Lec. Hubbard, H. G. Canad. Ent. XXIV, p. 250-6, 1892.

Bius estriatus Lec. Hubbard, H. G. Canad. Ent. XXIV, p. 250-6, 1892.

Diaperis maculata Oliv. Dimmock, G. Std. Nat. His., p. 352, 1884. Dimmock, A. K. Psyche IV, p. 284, 1885. Packard, A. S. 5th Rept. U. S. Ent. Comm., p. 510, 1890.

Hoplocephala bicornis Fab. Packard, A. S. 5th Rept. U. S. Ent. Comm., p. 510, 1890.

Platydema oregonense Lec. Hubbard, H. G. Canad. Ent. XXIV, p. 250-6, 1892.

Platydema ellipticum Fab. Weiss, H. B. Canad. Ent. LI, p. 276, 1919.

Boletotherus bifurcus Fab. Dimmock, G. Std. Nat. His., p. 352, 1884. Dimmock, A. K. Psyche IV, p. 284, 1885. Packard, A. S. 5th Rept. U. S. Ent. Comm., p. 510, 1890; Insect Life III, p. 355, 1891.

Eustrophus bicolor Say. Weiss, H. B. Psyche XXVI, p. 132-3, 1919.

Hallomenus scapularis Melsh. Blatchley, W. S. Col. Ind., p. 1294, 1910.

Orchesia castanea Melsh. Weiss, H. B. Canad. Ent. LI, p. 203-4, 1919.

Mordella marginata Melsh. Weiss, H. B. Ent. News, Vol. XXXI, pp. 67-68, 1920.

Anthonomus uniperinus Sanb. Blatchley, W. S. & Leng, C. W. Rhyn. N. E. Amer., p. 308, 1916..

Dendroctonus piceaperda Hopk. Hopkins, A. S. Bull. 28, n. s. U. S. Dept. Agric. Bur. Ent.

LEPIDOPTERA.

Prionoxystus robiniae Peck. Schrenk, H. von & Spaulding, P. Bull. 149. U. S. Bur. Pl. Indus., p. 41, 1909.

Tinea cloacella Haw. Weiss, H. B. Ent. News XXX, p. 251, 1919.

Tinea acapnopennella Clem. Weiss, H. B. Ent. News XXXI, p. 108, 1920.

DIPTERA.

Leia bivittata Say. Weiss, H. B. Psyche XXVI, p. 80-82, 1919.

HEMIPTERA.

Aradus similis Say. Smith, J. B. Ins. N. J., p. 139, 1909.

Aradus debilis Uhl. Hubbard, H. G. Canad. Ent. XXIV, p. 250-6, 1892.

GENERAL PAPERS.

Popenoe, C. H. Mushroom Pests & How to Control Them, Farmers Bull. 789, U. S. Dept. Agric.

Weiss, H. B. & West, E. Fungous Insects & Their Hosts, Proc. Biol. Soc. Wash., vol. xxxiii, pp. 1-20, 1920.

Change of Address.

Owing to renumbering of the city of Detroit, please note change of address. Old number 48 Webb Avenue. New number 90 Webb Avenue, to which all mail should be sent on and after January 1, 1921.

DR. W. W. NEWCOMB, Detroit, Michigan.

New Species of Cladiinae—Hymenoptera.

By Alex. D. MacGillivray, Urbana, Illinois.

The adults of all the following new species were bred from larvae collected in New York by Dr. Hachiro Yuasa and in Maine by Mr. Earl Shaw and the author for the Maine Agricultural Experiment Station. The descriptions are published so that the names can be used with descriptions of larvae that are to be published.

The types are deposited in the collection of the author.

Trichiocampus pacatus n. sp.

♀. Body black with the following parts white: trochanters, profemora more or less at distal end, tibiae except distal one-fourth of metatibiae, and tarsi except metatarsi; clypeus broadly shallowly emarginate; median fovea elongate, shallow, continuous with ocellar basin; frontal crest not well developed, broken, represented by thickenings on each side of break; ocellar basin distinct, depressed, lateral walls fine, inconspicuous, linear, extending to lateral ocelli; antennae with third and fourth segments subequal, fourth segment longer than fifth; head and thorax polished; wings infuscated, proximal two-thirds smoky; costa, stigma and veins blackish; saw-guides with dorsal margin straight, ventral margin convex, distal portion oblique, pointed above. Length 5 mm.

Habitat: Ithaca, New York. No. 88-1.

The form of the frontal crest and the ocellar basin will distinguish this species.

Trichiocampus patchiae n. sp.

♀. Body black with the following parts infuscated whitish: trochanters, distal portion of profemora and mesofemora, tibiae, and basitarsi; clypeus narrowly, angularly emarginate; median fovea circular, broad, shallow, inconspicuous; frontal crest strong, unbroken, narrow, rounded; ocellar basin flat, limiting lateral walls rounded, not linear, not conspicuous, a depression extending ventrad from median ocellus; head and thorax polished; wings infuscated, proximal two-thirds smoky, distal one-third clearer; costa, stigma and veins brownish; saw-guides with dorsal margin straight, ventral margin convex, distal portion blunt, pointed. Length 6 mm.

Habitat: Orono, Maine. Sub. 100.

This species differs from *pacatus* MacG. in the form of the frontal crest. Named for Dr. Edith M. Patch, Entomologist of the Maine Agricultural Experiment Station.

Trichiocampus paetulus n. sp.

♀. Body black with the following parts white: trochanters, cephalic

aspect of profemora in great part, distal ends of mesofemora and metafemora, tibiae except fuscous distal one-fourth of metatibiae, tarsi except fuscous metatarsi; clypeus broadly roundly emarginate; median fovea small, oval, shallow depression; frontal crest narrow, fairly strong, unbroken; ocellar basin flat, lateral walls linear and distinguishable in certain lights; antennae with third segment longer than fourth and fourth longer than fifth; head and thorax polished; wings infuscated, distal one-third clearer than proximal two-thirds; costa, veins and stigma brownish; saw-guides with dorsal margin straight, ventral margin straight, distal portion convex and oblique. Length 5 mm.

Habitat: Onekama, Michigan. Bred by the author from larvae on *Populus*.

This species can be separated from *pacatus* MacG. by the form of the median fovea.

Trichiocampus palliolatus n. sp.

♀. Body black with the following parts white: trochanters, cephalic aspect of profemora in great part, distal ends of mesofemora and metafemora, tibiae except fuscous distal end of metatibiae, and tarsi except fuscous metatarsi; clypeus broadly shallowly emarginate, almost truncate; median fovea subquadrangular, broad, comparatively deep; frontal crest not strong, not decidedly thickened, unbroken; ocellar basin not strongly depressed below area bearing median fovea, lateral walls inconspicuous, linear in certain lights; antennae with third segment longer than fourth and fourth longer than fifth; wings infuscated, proximal two-thirds darker than distal one-third; saw-guides with dorsal margin convex, ventral and distal margins convex and oblique, blunt. Length 5 mm.

Habitat: Ithaca, New York. No. 154-1-1.

This species is similar to *pacatus* MacG. but can be separated by the form of the frontal crest and the clypeus.

Priophorus modestius n. sp.

♀. Body black with the following parts infuscated white: trochanters, distal one-third of profemora, ring on distal end of mesofemora and metafemora, tibiae except ring on distal end of mesotibiae and metatibiae, and tarsi for the most part; clypeus shallowly roundly emarginate; median fovea broad, round, shallow, inconspicuous; frontal crest narrow, hardly raised, linear, unbroken; ocellar basin flat, lateral walls rounded, appearing linear in certain lights; antennae with third and fourth segments subequal, fourth longer than fifth; wings slightly infuscated, not smoky; veins, costa and stigma brownish, spinulae prominent; saw-guides retracted. Length 5.5 mm.

Habitat: Orono, Maine. Sub. 109.

This species is readily distinguished from *solitaris* Dyar by the form of the median fovea.

Priophorus moratus n. sp.

♀. Body black with the following parts white: trochanters, profemora more or less, tibiae except fuscous ring on metatibiae, and tarsi except metatarsi; clypeus broadly angularly emarginate; median fovea obsolete or at most only a slight circular depression; frontal crest narrow, thick, unbroken, strong; ocellar basin strongly depressed, limits fairly distinct, lateral walls completely rounded, never showing as linear ridges, depression extending ventrad from median ocellus; antennae with third segment slightly shorter than fourth and fourth longer than fifth; head and mesonotum polished; wings strongly infuscated, distal one-third clear; saw-guides with dorsal margin straight, ventral margin straight, distal end oblique, convex, pointed above. Length 6 mm.

Habitat: Orono, Maine. Sub. q.

The absence of a median fovea will serve to distinguish this species.

Priophorus munditus n. sp.

♀. Body black with the following parts white: trochanters, ring on distal ends of femora, tibiae except infuscated distal ends of metatibiae, and tarsi except metatarsi; clypeus broadly shallowly emarginate, almost truncate; median fovea deep, broad, twice as long as wide; frontal crest hardly thickened, broadly broken, practically wanting; ocellar basin distinct, flat, impression extending ventrad from median ocellus, lateral walls linear, distinguishable; antennae with third and fourth segments subequal, the fourth slightly shorter; wings infuscated, distal portion clearer; veins, costa and stigma brownish, spinulae distinct; saw-guides retracted. Length 5 mm.

Habitat: Orono, Maine, Sub. 174.

The form of the ocellar basin and median fovea will distinguish this species from *aequalis* Nort.

Demand the Metric System!

EDITOR ENTOMOLOGICAL NEWS—Your attention is respectfully called to the importance of the world-wide movement for metric standardization of weights and measures. It is an advance in which all are interested.

More than 100,000 petitions are on file with the Department of Commerce, Washington, D. C., demanding legislation which will establish the decimal metric system for general use in the United States after a liberal period of transition. Many of these petitions are from organizations having hundreds and thousands of members.

The present session of Congress is being called upon to enact progressive metric laws. Will not your publication strengthen this demand by strong editorial support? You can aid powerfully in establishing the logical decimal system.

"Get this good thing done in 1921."

Sincerely yours,

AUBREY DRURY, Secretary-Treasurer, World Trade Club,
San Francisco, U. S. America.

Entomology and the Professional Ideal.

By R. H. HUTCHISON, Malvern, Pennsylvania.

Some time ago a paper on "American Entomology: Its Present and Future Status as a Profession," was published and distributed by "a group of younger entomologists," the burden of its message being a strong plea for "a compensation sufficient to enjoy the necessaries of life." There can be no gainsaying the seriousness of the situation which they point out, especially in the matter of attracting and holding young men who in the next generation would be called upon to fill the places of the present leaders.

In considering a remedy they very creditably cast aside the idea of attempting to gain their end "through organization, union and strike," as used by the industrial worker, and they suggest that the end would best be attained if the men in the highest positions were "to waken to the condition and lend every effort to raise the standard of the profession through fair salaries for their assistants."

But let it be said by one who has been forced to give much thought to this matter that a general increase in salaries will not of itself give the profession any better standing or make it any more attractive to the right kind of men. Recent developments have made it plain that an even greater need is for a more general realization of professional ideals, and the leaders, even if they succeed in making entomology more attractive financially, fail if they neglect to impress on recruits the dignity of professional work in general and inspire them to follow certain high standards for Entomology in particular. Equal importance, and perhaps the only real solution of the question of compensation, lies in educating the people generally as to what professions stand for and what they are trying to do.

It will serve the purpose of this argument to review briefly the origin and distinguishing features of professions:

The professions of theology, law and medicine originated in the priesthood. The priests ministered alike to the bodies, souls and estates of their parishioners. They were lawgivers and administrators of the law. They were physicians and administrators of medicines, and they

were interpreters of the Divine Will, and dispensers of religious consolation.

As civilization advanced and knowledge accumulated, the several vocations practiced by the priests gradually segregated, resulting in the establishment of the three so-called "learned or liberal" professions. They were called "learned" because in ancient times most of the learning was confined to the priests. They were called "liberal" because the priests rendered their services without fees, obtaining their living from the church. . . . In process of time medicine and law were separated from the church,*

but the priestly ideal of consecrated service still clung to them.

In process of time also various lines of professional work split off from medicine and Entomology may truly be said to have originated thus. Most of the great names associated with the early developments of Entomology were those of physicians. Malpighi held a medical degree from the University of Bologna; Swammerdam, author of the famous "Anatomy and Metamorphosis of Insects," was both physician and naturalist. The great Linnaeus himself received a medical education.†

Analyzing various definitions of the term "profession" in the light of what has just been said we may affirm that there are at least three important characteristics which distinguish a profession from a trade or commercial vocation.

First: A profession is "learned," i. e., it presupposes an accumulation of knowledge based on critical rather than superficial observations and classified as a science. This is embodied and preserved in scientific literature using an exact nomenclature or terminology.

Second: A profession is "liberal" in the sense that money-making is a minor consideration, and necessarily so because the value of professional services cannot be measured in terms of money. A physician may save the life of a child sick with diphtheria by the very simple act of giving an adequate dose of antitoxin, but in no case does he receive full value for this service. The professional men who proved that malaria and yellow fever are mosquito-borne diseases rendered serv-

* Stewart, F. E. Journ. Am. Pharm. Assn. IX, No. 3 (Mar. 1920), p. 263.

† Locy. Biology and Its Makers. Henry Holt & Co., 1908.

ices to humanity which can never be evaluated in terms of money.

Third: A profession is altruistic. The professor uses his special knowledge in the service of others, giving them instruction, guidance or advice, or showing others how to apply his special knowledge to their art.

One of the most important of all professional services rendered to any profession is research work and the donation of the results of the same to the profession for the building up of the science upon which the profession depends.‡

By all these tokens then Entomology certainly ranks as a profession and one of the most altruistic. Entomologists, especially those in the Government employ, find themselves in a position to render service to the whole people and entomology as a profession is probably the least commercialized of any, with the exception of the Christian ministry. This is largely due to the fact that there are very few openings and no demand for entomologists outside the Government service and the Agricultural Colleges, not because they have striven more successfully for the attainment of this professional ideal. Far from it—and this leads to the point of the argument.

All Entomologists and others, who hold to the professional ideal and whose sense of the fitness of things has not been dulled by the depressing struggle against the high cost of living, will be inclined to look upon the action of some of the Entomologists of the Department of Agriculture in joining the Federal Employees Union and affiliating with the American Federation of Labor as a backward step, and one which *cheapens* the profession generally and *lowers* it in the estimation of managers of great industrial concerns who some day might come to appreciate the value of services which economic entomologists can render.

The apology for joining the Federal Employees Union was, of course, the totally inadequate salaries paid to Government scientific employees and the belief (doubtless sincere with many) that only by this move could sufficient pressure be brought to bear on an indifferent Congress to effect a readjustment of salary schedules to meet ever increasing expenses.

‡ Stewart—*loc. cit.*

There were those who knew only too well the financial difficulties encountered, yet felt themselves entirely out of sympathy with the action of their associates and were dimly conscious that a stimulating ideal had been thrown overboard. While they knew that "cloistered virtue" or the holier-than-thou attitude has no place in modern professional life, yet they felt that the way of true progress does not consist of throwing on the scrap heap all that the word "profession" stands for.

The situation becomes clearer with time. The move is now recognized as part and parcel of the all too general reaction which followed the armistice and the almost universal turning away from high ideals and generous impulses—a condition not without its influence even on liberally educated and presumably thinking men.

It will contribute to a better understanding of the reactionary nature of this move to compare it with the history of Pharmacy. To quote again from Stewart's interesting paper:

> The apothecaries in those days (about 1200 A. D.) were members of the Guild of Grocers and the vocation did not partake of a professional character. The apothecary, however, commenced to perfect himself in chemistry and pharmacy, because of its complexity gradually separated itself from the practice of the physician and was relegated to the apothecary. In the reign of James I, the apothecaries separated from the grocers and received the first charter of their own.

This vocation has since lost all the character of a Guild and the leaders have steadily striven and are still striving to put it on a true professional basis and obtain professional recognition.

The scientific section of the Federal Employees Union has reversed the process and assumed a status similar to that which the apothecaries *outgrew some* 400 *years ago*. They have wilfully and thoughtlessly given up that high standing and recognition which pharmacy has been striving for centuries to attain.

"But what shall we say of those who are free yet choose littleness and bondage?" And what shall it profit the profession if it gain a compensation equal to that of a plumber but lose a certain greatness of character?

ENTOMOLOGICAL NEWS.

PHILADELPHIA, PA., FEBRUARY, 1921.

Entomology at the Convocation Week Meetings of 1920-21.

The program of the 73rd Meeting of the American Association for the Advancement of Science and of Associated Scientific Societies held at Chicago, December 27, 1920, to January 1, 1921, lists 130 papers on the terrestrial Arthropods, including certain general papers, credited to the following societies:

Joint session of the Association of American Geographers and the Ecological Society of America	3
Paleontological Society of America	2
American Society of Zoologists	14
Entomological Society of America	27
American Association of Economic Entomologists	69
Botanical Society of America	4
Phytopathological Society	1
American Society of Naturalists	5
Ecological Society of America (see also above)	3
American Nature-Study Society	1
American Psychological Association	1

We are indebted to Mr. W. J. Gerhard for the information that one additional paper* was given at the Entomological Society of America, although not printed on the program, and that 8 of the 26 listed papers were not given. We have no corresponding figures for the other societies.

The subjects of these 130 papers were as follows:

General Biology	15	Odonata	1
Physiology	10	Mallophaga	1
Cytology	3	Neuroptera (Hemerobiidae)	1
Genetics	8	Coleoptera	13
General Economic Entom.	19	Hymenoptera	5
Apiculture	10	Lepidoptera	20
Araneina	2	Homoptera	12
Ixodoidea	2	Heteroptera	4
Other Acarina	1	Thysanoptera	1
Millepedes	1	Diptera	14
Orthoptera	7	Duplications	21

* ? Ripley: The Evolution of the Subterranean Habits of Noctuid Larvae.

The symposium of the Entomological Society of America was on the Relations between Taxonomic Affinities and Food Habits of Insects, with Special Reference to Parasitism, participated in by C. T. Brues (Hymenoptera), J. M. Aldrich (Diptera), and V. Kellogg (Mallophaga), the fourth speaker, F. C. Bishopp (Ixodoidea), not being present. The Annual Address, by Prof. W. A. Riley, was: Some Little-Emphasized Guide Posts to Medical Entomology. Other special addresses were by Dr. L. O. Howard: A Recent Visit to Certain European Entomologists; and by T. H. Frison: The Life-History of the Bumble Bee.

President Wilmon Newell addressed the Economic Entomologists on The Organization of Work in Economic Entomology; an address was given by Prof. C. E. McClung and one by W. C. O'Kane on Industrial Support for Scientific Work.

The total of 130 titles compares with 118 at St. Louis last year, plus 10 at Princeton, and with 139 at New York in 1916-17.

Notes and News.

ENTOMOLOGICAL GLEANINGS FROM ALL QUARTERS OF THE GLOBE

Recent Additions to the Hill Museum at Witley, Surrey, England. (Lepid.)

Mr. J. J. Joicey has recently acquired the important collection of Lepidoptera formed by Mr. H. J. Elwes, F. R. S., and the large collection of *Heliconius* formed by the late H. Riffarth. The Elwes collection contains most of the types of species of the Indo-Australian fauna described by Elwes, as also some types of Doherty, de Nicéville, Christoph and Staudinger; the material which formed the basis of Elwes & Edwards' monograph of Oriental Hesperidae, and of Elwes' papers on *Ypthima, Oeneis* and the butterflies of Chile; it is especially rich in Lycaenidae. The Riffarth collection contains over 2000 specimens and includes 360 types and paratypes described by Riffarth and Stichel. Mr. and Mrs. T. A. Barns have recently returned from a twelve months' expedition in Central Africa undertaken on behalf of Mr. Joicey, having obtained a very fine collection of Lepidoptera. The three brothers Pratt are collecting Lepidoptera in the mountainous interior of Dutch New Guinea for Mr. Joicey. Students desirous of comparing specimens and types in the museum are invited to write to the Curator, address as above. [Abridged from a note by GEO. TALBOT in Ent. Mo. Mag., Oct., 1920.]

New Synonymy in a Recent Paper on the European Corn-Borer. (Lepid.)

At the close of an otherwise valuable paper by W. P. Flint and J. R. Malloch, ("The European Corn-Borer and Some Similar Native Insects" Bull. Ill. Dept. Registration and Education, vol. 13, art. 10, pp. 287-305, June, 1920), the authors describe a new species under the name *Pyrausta caffreii*. The description is drawn from a single crippled male without biological notes and from two females without locality labels. The male type, according to the authors themselves, is in too poor condition for the wing markings to be properly distinguished, but it is described as darker than the females which are said to be very similar in color and markings to *obumbratilis* Flint & Malloch (*obumbratalis* Lederer?) (*ainslici* Heinrich) with forewings of a pale straw yellow. The specimens were apparently associated as conspecific on the ground that each possesses a conically produced face. A slight acquaintance with the *Pyralidae* should have told the authors that this is a generic character which excludes their supposed new species from the genus *Pyrausta*. In such a difficult group as the *Pyraustinae* the description of new species on such material would be indefensible even for one thoroughly familiar with all the described forms. In the present instance it is entirely unwarranted. Fortunately the authors have given figures of the male genitalia of their type which enables definite fixation of their wrongly placed species as a synonym of the common, widely distributed *Loxostege similalis* Gn. making *caffreii* Flint & Malloch the fourteenth name for this much described species. The female paratype from unknown locality associated with the unique crippled male is obviously another species, but causes no concern, as it does not affect the nomenclature. This case is a conspicuous example of the value of male genitalia in the determination of Lepidoptera. Even a mediocre partial figure enables correction of a wrong generic determination and the definite placing of an otherwise valueless type of an imperfectly described species, the name of which would otherwise remain a burden on our list.

With regard to *Pyrausta obumbratalis* Led. (*obumbratilis* Flint and Malloch) there is no question but that the species treated and figured under this name by Flint and Malloch is *Pyrausta ainsliei* Heinrich. The actual identity of *obumbratalis* Lederer cannot at present be ascertained without an examination of the type. It may prove to be either *ainsliei* or *penitalis* or some other species. For this reason it is advisable at present to have a sure name for a definite concept and to retain the name *ainslici* for the *Polygonum* feeder.

The figures and interpretations given by Flint and Malloch show a serious lack of knowledge of the parts of the male genitalia. The "basal spur," which the authors refer to as lacking in my figure of *ainslici*, is evidently the aedoeagus which I stated was purposely omitted from my drawing. This is poorly represented by the black central

part in Flint and Malloch's figure 42. It does not in any way correspond to the similar part, drawn, obviously to correspond, in their figure 41 of *penitalis*. The aedoeagus in all three species (*nubilalis, penitalis,* and *ainslici*) is strikingly similar; but *penitalis* of the three, alone possesses a stout spur arising ventrally to this organ from the base of the anellus and this the authors have figured as corresponding to the aedoeagus in *ainsliei*.

CARL HEINRICH, U. S. Bureau of Entomology,
Washington, D. C.

Entomological Literature

COMPILED BY E. T. CRESSON, JR., AND J. A. G. REHN.

Under the above head it is intended to note papers received at the Academy of Natural Sciences, of Philadelphia, pertaining to the Entomology of the Americas (North and South), including Arachnida and Myriopoda. Articles irrelevant to American entomology will not be noted; but contributions to anatomy, physiology and embryology of insects, however, whether relating to American or exotic species, will be recorded.

The numbers in **Heavy-Faced Type** refer to the journals, as numbered in the following list, in which the papers are published.

All continued papers, with few exceptions, are recorded only at their first installments.

The records of papers containing new genera or species occurring north of Mexico are all grouped at the end of each Order of which they treat.

For records of Economic Literature, see the Experiment Station Record, Office of Experiment Stations, Washington. Also Review of Applied Entomology, Series A, London. For records of papers on Medical Entomology, see Review of Applied Entomology, Series B.

4—Canadian Entomologist, London, Canada. **5**—Psyche, Cambridge, Mass. **12**—Journal of Economic Entomology, Concord, N. H. **15**—Insecutor Inscitiae Menstruus, Washington, D. C. **17**—Lepidoptera, Boston, Mass. **19**—Bulletin of the Brooklyn Entomological Society. **20**—Bulletin de la Societe Entomologique de France, Paris. **21**—The Entomologist's Record, London. **33**—Annales de la Societe Entomologique de Belgique, Brussels. **45**—Zeitschrift fur wissenschaftliche Insektenbiologie, Berlin. **50**—Proceedings of the United States National Museum, Washington. **54**—Proceedings of the Biological Society of Washington, D. C. **61**—Proceedings of the California Academy of Sciences, San Francisco. **62**—Bulletin of the American Museum of Natural History, New York. **70**—Journal of Morphology, Philadelphia. **71**—Novitates Zoologicae, Tring, England. **72**—The Annals of Applied Biology, London. **76**—Nature, London. **82**—The Ohio Journal of Science, Columbus. **100**—Biological Bulletin of the Marine Biological Laboratory, Woods Hole, Mass. **105**—Proceedings of the Iowa Academy of Sciences, Des Moines. **108**—Journal of Genetics, Cambridge, England. **111**—Archiv fur Naturgeschichte Berlin. **117**—Memorias do Instituto Oswaldo Cruz, Rio de Janeiro. **118**—Die Naturwissenschaften, Berlin.

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CATALOGUE OF THE COLEOPTERA OF AMERICA, NORTH OF MEXICO.
BY CHARLES W. LENG.

We are able to announce the appearance of this longlooked-for catalogue. It will be especially welcomed by the North American coleopterists, and we expect to have a thorough reveiw of it appear in a subsequent issue of this journal. We will say, however, from a general student's casual glance, that it is a thoroughly practical work of its kind. Copies can be purchased at Ten Dollars each from John D. Sherman, Jr., 132 Primrose Avenue, Mount Vernon, New York.

Regarding the dates of issue of this catalogue, the following information was received from Mr. Sherman.

The first copy of the paper edition was delivered to Dr. Samuel Henshaw, of The Museum of Comparative Zoology, Cambridge, Mass., December 24, 1920, and other copies mailed the same date to Dr. E. A. Schwarz, of the United States National Museum, Washington, D. C., and to Prof. H. F. Wickham, Iowa City, Iowa. Copies were on sale by Mr. Sherman, December 27th, and on December 28th copies were sent to the Editor of Science, Garrison, N. Y., The American Entomological Society, Philadelphia, and to A. S. Mutchler, of the American Museum of Natural History, New York. A copy was purchased from Mr. Sherman, December 29th, by H. L. Gifford, 2426 Palmetto St., Brooklyn, N. Y., and on the same date one was delivered to Prof. H. C. Fall while in New York City. The copy sent to The American Entomological Society was received by it December 30th, so stamped and placed in its Library.—E. T. CRESSON, JR., Librarian A. E. S.

Doings of Societies.

The American Entomological Society.

Meeting of December 8, 1919, in the hall of The Academy of Natural Sciences of Philadelphia. Twelve persons present, including Messrs. J. J. Davis and C. H. Hadley, of the Riverton (New Jersey) Entomological Laboratory. The President, Dr. Henry Skinner, in the chair.

Dr. Skinner announced the death of Mr. George B. Cresson, who became a member of the Society April 11, 1879, and made some remarks in appreciation of his character and entomological work.*

On motion the following dates were chosen for the meetings of the Society in 1920: the fourth Thursdays of February, April and October; the first Monday of June, and the second Monday of December.

The following were regularly nominated and elected to serve as officers and on committees of the Society for 1920: *President*, Henry Skinner; *Vice President*, J. A. G. Rehn; *Corresponding Secretary*, Morgan Hebard; *Recording Secretary*, R. C. Williams; *Treasurer*, E. T.

* See the NEWS for Jan., 1920, vol. xxxi, p. 29.

Cresson; *Publication Committee*, J. A. G. Rehn, E. T. Cresson and P. P. Calvert; *Finance Committee*, D. M. Castle, Morgan Hebard and J. A. G. Rehn; *Property Committee*, E. T. Cresson, Jr., Morgan Hebard and Philip Laurent.

Meeting of February 26, 1920, in the same hall. Seven persons present. The President, Dr. Skinner, in the chair.

ORTHOPTERA.—Mr. J. A. G. Rehn exhibited a copy of J. Gundlach's *Contribucion a la Entomologia Cubana*, Parte IV, treating of the Orthoptera, which he had recently received and is turning over to the Society's library in which it has been lacking. This is a very rare publication. He called attention to Dr. Calvert's paper on Gundlach's publications in the Society's Transactions, vol. xlv, no. 4. He also made a few remarks upon sexual dimorphism in the Dermaptera, illustrating them chiefly by African forms which he had been studying recently, and spoke concerning the macrolabic and cyclolabic development of the forceps in the males of certain genera.

HEMIPTERA.—Mr. W. T. Davis exhibited and presented to The Academy of Natural Sciences specimens of *Okanagana magnifica* Davis from the Jemez Mountains of New Mexico (Woodgate), from Arizona and Colorado.

LEPIDOPTERA.—Dr. Skinner exhibited boxes of Pyrrhopyginae and Hesperiinae showing curious mimicry.

GENERAL.—He also exhibited a piece of lead sheathing from a telephone cable in Texas which was curiously punctured by an insect which bores through the lead. The identity of the species is unknown, but it has done damage to the lines in that region.

R. C. WILLIAMS, *Recording Secretary.*

OBITUARY.

JAMES S. JOHNSON—died at his home, 3314 Benner Street, Wissinoming, Philadelphia, December the 14th, 1920, aged eighty-four years. Mr. Johnson was one of the first to engage in the upholstery business in Frankford, where he was born. During the Civil War he was in command of a hospital ship. Interment was made at Cedar Hill Cemetery.

He was interested in moths and had an excellent local collection. The genus *Catocala* appealed particularly to him and near his home he captured and recorded fifty-one species and varieties.

Mr. Johnson also conducted *The Naturalist's Journal*, published at Philadelphia, and in it he published a number of popular articles on various species of moths. In the *Canadian*

Entomologist for 1881 appeared an article on *Hyphantria textor* and in the year before one on "Early Appearance of Catocalas." In *Entomological News* for 1891 three articles were by him, the most important being entitled "Hunting Catocalae," a list of the local species being given with dates of appearance. Mr. Johnson was a genial man and an ardent collector and naturalist.—H. S.

Obituary notices of the following entomologists have been published in recent numbers (September--November, 1920) of the *Entomologist's Monthly Magazine* (London):

WILLIAM WEST, born at Rotherhithe in 1836, died at Harringay, Middlesex, July 20, 1920. His work was in the brass foundry of John Penn & Sons, Greenwich, for nearly fifty years. He was one of the founders of the South London Entomological and Natural History Society and Curator of their collections. He presented his collection of Homoptera (ca. 3500 spmns.) to the Natural History Museum at South Kensington. His few written communications concern British insects.

F. C. ADAMS, an extensive collector of Diptera, who presented his specimens (ca. 9000), chiefly taken in the New Forest, to the same Museum, died in February, 1920.

FRANK MILBURN HOWLETT, Second Imperial Entomologist of India (1907) and, at the time of his death, Imperial Pathological Entomologist at Pusa, died after an operation at Mussoorie, India, August 20, 1920. He was born at Norfolk, in 1877, was a scholar at Christ's College, Cambridge (1896-1900), taught in England, and then at Allahabad University, first in chemistry, then in biology (1905-1907). He contributed some of the sections to Professor Maxwell Lefroy's *Indian Insect Life* (1909). He was especially interested in Diptera and in chemical and physical problems relating to entomology.

ALFRED EDMUND HUDD, who died October 7, 1920, aged 75, contributed articles on British Lepidoptera and Diptera and was also a generous donor to the British Museum of Natural History.

EXCHANGES

This column is intended only for wants and exchanges, not for advertisements of goods for sale. Notices not exceeding three lines free to subscribers.

These notices are continued as long as our limited space will allow; the new ones are added at the end of the column, and only when necessary those at the top (being longest in) are discontinued.

Lepidoptera Hesperidae wanted.—I will purchase or exchange and also name specimens. South American species particularly desired. Henry Skinner, Logan Square, Philadelphia, Pa.

For Exchange—Iowa Catocalae in A-1 condition. Wanted, Cocoons of Actias luna also other lepidoptera. Mrs. O. F. Hiser. Arnolds Park, Iowa.

Books Wanted—Entomological News, Vol. 11, Nos. 1, 3, 5; Vol. 14, Nos. 1, 7. Brooklyn Museum Library, Eastern Parkway and Washington Ave., Brooklyn, N. Y.

Wanted—N. A. Coleopterists interested in European Coleoptera. Liberal exchanges and friendly correspondence. Mr. C. Crozet, 155, Via Cavour, Rome, 23, Italy.

Japanese and Formosan Butterflies will be exchanged by S. Satake, 48, Aoyama-minami-machi, 5-chome Tokyo, Japan.

Wanted—To purchase or exchange papers and books on insect Biology, Ecology and Behavior, especially aquatic Hemiptera.—C. F. Curtis Riley, Department of Forest Zoology, The New York State College of Forestry at Syracuse University, Syracuse, N. Y.

Wanted—North American or European Coleoptera to determine in exchange for specimens.—R. T. Garnett, 625a 14th st., Oakland, Cal.

Wanted—Species of Rhynchophora from Eastern North America not represented in my collection, in exchange for duplicates from Indiana and Florida. Lists of desiderata and duplicates on application.—W. S. Blatchley, 1530 Park Ave., Indianapolis, Indiana.

Omophron and **Elaphrus** desired, in numbers, including the common species. Good exchange given. H. F. Wickham, Iowa City, Ia.

Wanted—To examine, determine and exchange Cicadellidae or "Jassidae" from all parts of North America. J. G. Sanders and D. M. DeLong, State Capitol, Harrisburg, Pa.

Wanted—To purchase Stretch, Illustrations of the Zygaenidae and Bombycidae of North America.—Dr. E. T. Learned, Fall River, Mass.

Lepidoptera.—Offer in exchange for rare S. American Lepid., about 400 Rhopalocera in papers from S. Cameroun (Africa), mostly Papil. Pierid, Danaid, Satyrid and Nymphal.—J. H. Jurriaanse, Shiekade 75, Rotterdam, Holland.

Twenty-nine 12 x 15 insect boxes for exchange for Elateridae not in my collection. Address H. B. Kirk, 1902 North St., Harrisburg, Pa.

Wanted—Cynipidae and their galls from all parts of the world for cash or exchange. Wm. Beutenmuller, Box 258, Highwood, N. J.

Lepidoptera—Offer many palae. species, especially from the Swiss and French Alps with full data to exchange. Also have many papers and books on Lepidoptera and other insects. Albert Oertel, Riebeck Str., 5, Leipzig, Germany.

Pacific Coast Lepidoptera for exchange by our Club. Send your list. Exchange Dept., Entomological Section, Lorquin, Nat. Hist. Club. Address Mr. Geo. B. Pearson, manager, 812 Stevenson Ave., Pasadena, Calif.

JOHN D. SHERMAN, JR.

MOUNT VERNON, NEW YORK

ANNOUNCES THE PUBLICATION OF A

CATALOGUE OF THE COLEOPTERA OF AMERICA

NORTH OF MEXICO

BY

CHARLES W. LENG

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Mr. Sherman has no hesitation in offering this great work of Mr. Leng as pre-eminently the most important book on North American Beetles that has been published since the famous "Classification" by Doctors LeConte and Horn, issued in 1883.

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It contains descriptions of new genera and species in all orders (British and foreign), life histories, reviews of new works, etc. Volume LVI (VI of the second series) was commenced in January, 1920. The subscription for the 12 numbers is 15 shillings per annum, post free, to be sent to R. W. Lloyd, I, 5, Albany, Piccadilly, London, W., England. For terms for advertisements apply to him also.

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